

MEASUREMENT OF CUSTOMER SATISFACTION IN ONLINE BANKING
SERVICES IN MELLI BANK OF IRAN

SEYED HOSSEIN NIKOU

UNIVERSITI TEKNOLOGI MALAYSIA

SUPERVISOR’S DECLARATION

“I hereby declare that I have read this dissertation and in my opinion this dissertation is sufficient in term of scope and quality for the award of the degree of Master of Science (Information Technology-Management).”

Signature :.....

Name of Supervisor : Assoc. Prof.Dr.HarihodinSelamat

Date :.....

MEASUREMENT OF CUSTOMER SATISFACTION IN ONLINE BANKING
SERVICES IN MELLI BANK OF IRAN

SEYED HOSSEIN NIKOU

This dissertation submitted in partial fulfillment of the
requirement for the award of the degree of
Master of Science (Information Technology-Management)

Advanced Informatics School (UTM AIS)
Universiti Teknologi Malaysia

JANUARY 2012

DECLARATION

“I declared that this dissertationentitled (*Measurement of Customer Satisfaction in Online Banking Services in Melli Bank of Iran*) is the result of my own dissertationexpect as cited in the references. The dissertationhas not been accepted for any degree and is not concurrently submitted in candidate of any other degree.”

Signature :.....

Name :SEYED HOSSEIN NIKOU

Date :.....

Special dedicated to my beloved parents

ACKNOWLEDGEMENT

The reason to stay condemned on my long way to my far destination was remembering below sentences:

To learn and never be filled is wisdom.

To Teach and never be weary is love.

First of all I would like to express my sincere gratitude to my supervisors, Assoc. Prof.Dr. HarihodinSelamat for his intelligent guidance and helpful advice during the whole process, and Assoc. Prof.Wardah for her very helpful supports.

With all my love to those which without their helps, never I could achieve my goals.

I would first and foremost like to express my gratitude to my parentsfor the love, affection and support; they have extended me every step of mylife.

Unforgettable thanks goes to my sister, brothersfor their support in so many ways.

ABSTRACT

In recent years, banking companies have made considerable investments in creating the structures needed to provide electronic and internet services to customers. “Melli Bank” has also tried to extend its field of activities and particularly to excel in the internet services section. One of the most important developments which occurred in the field of quality improvement theories in the last decade of the twentieth century was the recognition of measuring customer satisfaction as a major requirement of quality management systems in all institutions and commercial enterprises. Satisfying customers is an essential element to staying in business in this modern world of global competition. In this study, the most important qualitative dimensions in the banks’ providing of internet services have been put forth. A comprehensive and accurate questionnaire has then been designed in accord to these aspects and the rate of customer satisfaction to the quality of Melli Bank’s internet services has been measured through the use of a suggested model. The ultimate result is a set of solutions and suggestions which can be effective strategies in improving the quality of internet services in the mentioned bank. It should be mentioned that the number of internet banking services of Melli Bank in the city of Shiraz was not large and the questionnaires had been handed out to them by the branch managers, thus random selection of customers for the survey has not been possible. However, the amount obtained by Cronbach’s alpha reliability and validity factor in the third chapter, asserts the accuracy and reliability of the research method conducted in this study.

ABSTRAK

Dalam tahun-tahun kebelakangan ini, syarikat-syarikat perbankan telah membuat pelaburan besar dalam mewujudkan struktur yang diperlukan untuk menyediakan perkhidmatan elektronik dan Internet kepada pelanggan. "Melli Bank" juga telah cuba untuk melanjutkan bidang aktiviti dan terutamanya untuk cemerlang dalam eksyen perkhidmatan Internet. Salah satu perkembangan yang paling penting yang berlaku dalam bidang teori peningkatan kualiti dalam dekad terakhir abad kedua puluh adalah pengiktirafan mengukur kepuasan pelanggan sebagai keperluan utama sistem pengurusan kualiti dalam semua institusi dan perusahaan komersial. Memuaskan hati pelanggan merupakan elemen penting untuk perniagaan di dunia moden kerana persaingan global. Dalam kajian ini, dimensi kualitatif yang paling penting dalam 'bank-bank menyediakan perkhidmatan internet' telah dikemukakan. Satu soal selidik yang komprehensif dan tepat kemudiannya telah direka bersesuaian dengan aspek-aspek ini dan kadar kepuasan pelanggan dengan kualiti perkhidmatan internet Melli Bank telah diukur melalui penggunaan model yang disyorkan. Keputusan muktamad adalah satu set penyelesaian dan cadangan yang boleh strategi yang berkesan dalam meningkatkan kualiti perkhidmatan internet di bank yang disebut. Ia perludisebut bahawa bilangan perkhidmatan perbankan internet Melli Bank di bandar Shiraz tidak besar dan soal selidik telah diedarkan kepada mereka oleh pengurus cawangan, oleh itu pemilihan secara rawak pelanggan untuk kajian selidik tidak mungkin. Walaubagaimanapun, jumlah yang diperoleh oleh kebolehpercayaan alpha Cronbach dan faktor kesahihan dalam bab ketiga, menegaskan ketepatan dan kebolehpercayaan kaedah penyelidikan yang dijalankan dalam kajian ini.

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	xi
	LIST OF FIGURES	xiii
	LIST OF APPENDIX	xiv
1	INTRODUCTION	
	1.1 Introduction	1
	1.2 Background of Study	2
	1.3 Problem Statement	4
	1.4 Importance of Study	5
	1.5 Objectives	6
	1.6 Scope	6
	1.7 Research Questions	6
2	LITERATURE REVIEW	
	2.1 Introduction	8
	2.2 Customer Concept	9
	2.2.1 Classifications of Customers	10
	2.3 Customer Satisfaction	10
	2.4 Satisfaction Formation	12
	2.5 Importance of Achieving Customer Satisfaction	14

2.5.1	Philosophy of Maximizing Customer Satisfaction Win, Win, and Win	14
2.5.2	Economic Stimulations and Commitments of the Organization to the Customer Satisfaction	15
2.6	Customer Satisfaction Index	16
2.7	Information Technology	17
2.8	Service Concept	17
2.9	Quality Concept	18
2.9.1	Quality as Conformance to Specifications	19
2.9.2	Quality as Meeting Customers' Expectations	20
2.10	Service Quality	21
2.10.1	Definition of Service Quality	22
2.11	Service Quality and Satisfaction	22
2.12	Relationship between Satisfaction and Service Quality	24
2.13	Online Service Quality and Customer Satisfaction	24
2.14	Quality Dimensions of Online Services	25
2.15	Measuring Customer Satisfaction	29
2.16	Dimensions of Service Quality from another Perspective	31
2.17	Customer Satisfaction Measurement and Evaluation	33
2.17.1	Event-Oriented Methods (Non - Computerize)	35
2.17.1.1	General Plan and Identifying	35
2.17.1.2	Observation	36
2.17.1.3	Sequential Events Method	36
2.17.1.4	Critical Incident Technique	36
2.17.1.5	Analysis of Complaints	37
2.17.2	Feature-Oriented Methods (Computerized)	37
2.17.2.1	One Dimensional Measure	38
2.17.2.2	Multidimensional Measures	38
2.18	Service Quality Based on SERVQUAL Method	39
2.19	Frame of Reference	42
2.20	Conceptual Framework	42
3	RESEARCH METHODOLOGY	
3.1	Introduction	46

3.2	Research Purpose	46
3.3	Research Approach	48
3.3.1	Quantitative Approach	48
3.3.2	Qualitative Approach	49
3.4	Research Strategy	49
3.5	Data Collection	50
3.5.1	Sample Size Determination	50
3.5.2	Spatial and Temporal Realm of Research	51
3.6	Data Analysis	51
3.7	Validity and Reliability	51
3.7.1	Validity	52
3.7.2	Reliability	52
4	FINDING AND ANALYSIS	
4.1	Introduction	56
4.2	Description Statistics	57
4.2.1	Study on Population of Research Sample	57
4.2.1.1	Gender of Respondents	57
4.2.1.2	Age of Respondents	58
4.2.1.3	Educational Level of Respondents	60
4.2.1.4	Employment Status of Respondents	61
4.3	Inferential Statistics	63
4.3.1	What are the Main Factors for Measuring the Customers' Satisfaction of Online Services ?	63
4.3.2	What is Relationship between Quality Dimensions And Customer Satisfaction in Online Banking Services In Melli Bank?	65
4.3.3	What is Relationship between Reliability in Quality Dimensions and Customer Satisfaction?	66
4.3.4	What is Relationship between Responsiveness in Quality Dimensions and Customer Satisfaction?	67
4.3.5	What is Relationship between Efficiency in Quality Dimensions and Customer Satisfaction Melli bank?	68
4.3.6	What is Relationship between Security in Quality Dimensions and Customer Satisfaction?	69

4.3.7What is Relationship between Fulfillment in Quality Dimensions and Customer Satisfaction Melli Bank?	69
4.3.8What is Relationship between Contact in Quality Dimensions and Customer Satisfaction Melli Bank?	70
4.3.9What is the Relationship between Quality Dimensions Of Online Banking Services in Melli Bank?	73
4.3.10What is the Overall Sustomer Satisfaction Regarding Online Banking Services in Melli Bank?	74
4.4Summary of Research Questions (Q-Q6)	74
4.5Conclusion	76

5 CONCLUSION AND RECOMMENDATION

5.1Summary	77
5.2Results	77
5.2.1Factors for the Quality Dimension of Reliability	78
5.2.2Factors for the Quality Dimension of Responsiven	78
5.2.3Factors for the Quality Dimension of Efficiency	79
5.2.4Factors for the Quality Dimension of Security	79
5.2.5Factors for the Quality Dimension of Fulfillment	80
5.2.6Factors for the Quality Dimension of Contact	80
5.3Research Limitations	82
5.4Recommendations	83
5.4.1General Recommendations	84
5.4.2Specific Recommendations	85
5.5Recommendations for the Future Studies	86

REFERENCES 87

Appendix

LIST OF TABLES

TABLE NO.	TITLE	PAGE
2.1	Defining Service Quality	22
2.2	Online Service Quality Dimensions Considered for This Study	43
2.3	Online Service Quality Measurement Criteria	44
3.1	Reliability Statistics	52
3.2	Item-Total Statistics	53
3.3	Item-Total Statistics	54
4.1	Frequency Distribution – Gender	57
4.2	Statistics Descriptive –Gender	58
4.3	Frequency Distribution – Age	59
4.4	Statistics Descriptive –Age	60
4.5	Frequency Distribution – Education	60
4.6	Statistics Descriptive –Education	61
4.7	Frequency Distribution – Job	62
4.8	Statistics Descriptive –Job	63
4.9	Factors and Quality Dimensions in Measuring the Satisfaction Level of Customers from Online Services of the Melli Bank	64
4.10	Correlation between Qualitative Dimensions and Satisfaction	66
4.11	Correlation between Reliability and Satisfaction	67
4.12	Correlation between Responsiveness and Satisfaction	68
4.13	Correlation between Efficiency and Satisfaction	68
4.14	Correlation between Security and Satisfaction	69
4.15	Correlation between Fulfillment and Satisfaction	70
4.16	Correlation between Contact and Satisfaction	70
4.17	Regression Model (Variables Entered/Removed)	71
4.18	Model Summary	71

4.19 ANOVA ^b	72
4.20 Coefficients ^a	72
4.21 Correlation Matrix	73
4.22 Mean in Q23-Q24	74
4.23 Summary of Question Testing	75

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
2.1	Primary model of customer satisfaction	12
2.2	Satisfaction Formation	13
2.3	Quality Service Dimensions	32
2.4	This Model is an Extension of the Walfried.M.Lassar Model	33
2.5	Customer Satisfaction Measurement and Evaluation Methods	34
2.6	Conceptual Framework Adopted for this Study	42
4.1	Frequency percentage of Gender	58
4.2	Frequency percentage of Age	59
4.3	Frequency percentage of Education	61
4.4	Frequency percentage of job status	62

LIST OF APPENDIX

APPENDIX	TITLE	PAGE
A	Questionnaire	89

CHAPTER 1

INTRODUCTON

1.1 Introduction

Internet banking is the term used for new age banking system. Internet banking also called as online banking and it is an outgrowth of PC banking. Internet banking uses the internet as the delivery channel by which to conduct banking activity, for example, transferring funds, paying bills, viewing checking and savings account balances, paying mortgages and purchasing financial instruments and certificates of deposits (Haque et al., 2009).

Customers have started perceiving the services of bank through internet as a prime attractive feature than any other prime product features of the bank. Customers have started evaluating the banks based on the convenience and comforts it provides to them. Bankers have started developing various product features and services using internet applications.

Although in the earlier and perhaps even to the end of the twentieth century, acquiring customer satisfaction was merely a slogan campaign, it has now been turned into one of the bases of quality systems and among the major concerns of commercial enterprises. Even where the lack of competition has evolved the market into a proprietary one, the realization of customer-centered policies has gained the attention of managers and industry owners. Based on different studies it can be said that gaining customer satisfaction can gradually build up trust and a sense of loyalty in the customers. A loyal customer will not only refer to its favorite organization to buy products or services over and over again, but as a factor in terms of advertising

of the products and services of the organization by word of mouth it will definitely play a vital role in raising profits and improving company image. But speaking about the measurement of such concepts as the rate of customer satisfaction brings to mind a precious quote from Lord Kelvin as he says: “when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely in your thoughts advanced to the state of Science, whatever the matter may be.

In this research, after studying the latest domestic and international contexts in the field, the extraction of the most important and effective qualitative aspects of service in the internet banking field will be done. Then by the use of a simple conceptual model, measurement of the rate of customer satisfaction regarding the internet banking services of Melli Bank in the city of Shiraz will be undergone. After collection and analysis of the data, a set of strategies will be suggested to the managers and persons in charge at Melli Bank. Thus, the general research items will be mentioned in chapter one. Chapter two will cover a literature review including the history, definitions and related concepts. In chapter three after thorough description of the research methodology, statistical group and sample, and physical and timely scopes of the study, the analytical model and validity and reliability will be addressed.

1.2 Background of Study

Information Technology (IT), nowadays, backed by its special characteristics, has had a great effect on social, economic, cultural, etc. institutions in different communities and has brought up vast change in administrative affairs and information systems. The result of this is the ease in completion of all inner organizational functions, data reporting, and services all with higher speed and quality to the people, Hence in the last two decades, advanced and developing countries alike, have asserted information technology as the central axis of

development. Financial industries such as the banking sector in regard to their needs in the collection, processing, analysis, and presentation of information, have relied upon IT more deeply in addressing the needs of the customer. The use of IT in banks has led to a large revolution in the banking industry, and thus ignoring IT in banking will surely deem it void and impossible.

One of the most important changes brought up in the last decade of the twentieth century in the field of quality improvement issues was the recognition of the measurement of customer satisfaction as one of the main requirements of quality management systems in all institutions and commercial entities. The great efforts put forth today by researchers, specialists and organizational managers in improving the tools of quality management and the spread of customer centeredness attitude, stresses the fact that customer satisfaction is currently of the major factors in leading organizations to success and their financial benefits. Although before and maybe even up to the end of the twentieth century obtaining customer satisfaction was more of a publicity stunt, it has now turned into one of the major elemental criteria of quality systems and concerns of businesses. Even where the lack of competition has evolved the market into a proprietary one, the realization of customer-centered policies has gained the attention of managers and industry owners. Based on different studies it can be said that gaining customer satisfaction can gradually build up trust and a sense of loyalty in the customers. A loyal customer will not only refer to its favorite organization to buy products or services over and over again, but as a factor in terms of advertising of the products and services of the organization by word of mouth it will definitely play a vital role in raising profits and improving company image. But speaking about the measurement of such concepts as the rate of customer satisfaction brings to mind a precious quote from Lord Kelvin as he says: "when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely in your thoughts advanced to the state of Science, whatever the matter may be." (Kavusy and Saghaei, 2004)

As Melli Bank of Shiraz is a leading bank in terms of providing customer needs and demands statewide, raising customer satisfaction rates will not be possible without prior measurement of the current levels. Success in the banking sector requires a structured, orderly, and continuous system of evaluation of customer satisfaction. The results will facilitate better strategy adoption in banking services.

In this chapter, will investigate topics such as: statement of the problem, importance of research, objective of the study, and research questions.

1.3 Problem Statement

In a competitive market place understanding customer's needs become an important factor. As a result companies have moved from a product-centric to a customer centric position. Satisfaction is also of great interest to practitioners because of its important effect on customer retention (Patterson et al., 1997); (Sedon 1997). Retention is a major challenge particularly in internet based services, as customers can easily switch from one service provider to another at low cost (Khalifa and Liu 2003). Considering the high costs of acquiring new customers and the apparently high customer turnover of many online services, it is very important to study the determinants of customer satisfaction (Van Riel, Liljander&Jurriens 2001).

The functionality of any business depends on its success in preserving its customers. In fact, customer satisfaction has rapidly turned into the key parameter in inter-industry competition. Most companies and institutions believe that achieving commercial business reputation through customer confidence not only guarantees the successful presence of a business for a much longer time, it benefits the organization through positive word of mouth. But it should be kept in mind that providing customer satisfaction is essential to preserving the customer. Findings point to the fact that more than 90% of unsatisfied customers of any given organization don't try to communicate their complaint or suggestion to the entity in charge. These customers look to the competition to satisfy their needs and spread their complaint with much delight to other potential customers (Jacklyn and Fireman 1995).

In the past few years in Iran, banks have greatly invested in providing the required structures required for electronic services to customers. Melli Bank has also attempted to increase its field of activities. Extensive research has been done on the evaluation of customer satisfaction in traditional banking services in branches where direct physical confrontation between bank personnel and the customer occurs, while assessment of internet services is a relatively new field in which methods have been only recently proposed for it. The purpose of this research is to study these methods and select appropriate strategies by combining the existing methods with regards to the current applied internet services of Melli Bank and the cultural conditions of the customers.

From above discussion, the research problem for this study could be formulated as:

How measure the level of customer satisfaction on online banking services in Melli bank?

1.4 Importance of Study

In light of various reasons such as the increase in national population, lack of economic justification of traditional banking, the very high costs of banknote printing and distribution (which amounts annually to more than one and a half trillion rials), the ever increasing technological advances, advances in telecommunications within the country, and the increased public education, etc. the people's interest in wanting to do their banking operations through the internet is on a steady increase. And this shows the necessity of Iranian banks' shift towards information technology and expanding their internet services. Thus in this path in increasing the efficiency of banks in internet services the need for a model for assessing customer satisfaction ratio is obvious. Also due to the establishment and development of numerous private banks in the country and the institutionalization of the principle of competition, and also in light of the twenty year outlook, banks of the Islamic republic of Iran are held responsible in planning their approach to reaching such a purpose. This all confirms the fact that the new mission of the country's banks in

current and near future years is to increase the functionality and efficiency of internet service providing. This matter is in need of analysis and information collection and also collecting feedback from the customers of banks' internet services.

1.5 Objectives

These are the objectives of the project:

- To investigate qualitative dimensions of online banking services for assessment of customer satisfaction levels in Melli bank.
- To evaluate the relationship between quality dimensions of online banking services in Melli bank.
- To evaluate the relationship between quality dimensions with customer satisfaction levels in the online banking services in Melli bank.

1.6 Scope

This research will be done in Shiraz Melli Bank branches, with command and coordination of the respected head of research and development unit of Melli Bank, supervision and management coordination unit bank branches and Melli cooperation of Shiraz we will be able to collect feedback from customers who use Online Banking Services.

1.7 Research Questions

1. What are the main qualitative dimensions in online banking services?

What are the relationship between quality dimensions and customer satisfaction in online banking services? (Question 2-7)

2. What is relationship between Reliability in quality dimensions and customer satisfaction?
3. What is relationship between Responsiveness in quality dimensions and customer satisfaction?
4. What is relationship between Efficiency in quality dimensions and customer satisfaction?
5. What is relationship between Security in quality dimensions and customer satisfaction?
6. What is relationship between Fulfillment in quality dimensions and customer satisfaction?
7. What is relationship between Contact in quality dimensions and customer satisfaction?
8. What is the relationship between online banking services quality dimensions?
9. What is the overall customer satisfaction regarding online banking services?

REFERENCES

- Bahia, K., and Nantel, J. (2000). "A reliable and valid measurement scale for the perceived service quality of banks". *International Journal of Bank Marketing*, Vol. 18, No.2, pp. 84-91.
- Bauer, H., Hammerschmidt, M & Falk, T.(2005). "Measuring the quality of E-banking portals".*International Journal of Bank Marketing*, Vol. 23, No. 2, pp. 153-175.
- CaiShaohan and Jun Minjoon, 2003; Internet users' perceptions of online service quality: a comparison of online buyers and information searchers; *Managing Service Quality*, Vol. 13 · No. ,6 pp. 504-519.
- Caruana, A.,and Malta, M (2002). "Service loyalty-The effects of service quality and the mediating role of customer satisfaction".*EuoropeanJounal of marketing*, Vol.36 No.7/8, pp.811-828.
- Caruana, A.,and Malta, M (2002). "Service loyalty-The effects of service quality and the mediating role of customer satisfaction".*EuoropeanJounal of marketing*, Vol.36 No.7/8, pp.811-828.
- Creswell, J.W., (2003), *Research Design: Qualitative, Quantitative and Mixed Methods Approach*, Second Edition, Sage Publication, Inc.
- Cronin, J.J. and Teylor, S.A (1992). "Measuring Service quality" : A Reexamination and Extention". *Journal of Marketing*, Vol. 21, No. 4. pp. 55-68.
- Fornell,C., M. D. Johnson. Anderson, J. Cha and B.E Bryant. (1996). "The American Customer Satisfaction Index: Nature, Purpose, and Findings. *Journal of Marketing*, vol, 60. No.4: pp.7-18.
- Gounaris, Spiros, and Dimitriadis, Sergios (2003). "Assessing Service Quality on the Web: Evidence from Business-to-Consumer Portals".*Journal of Services Marketing*, Vol. 17, No. 5, pp. 529-548.

- Grönroos, C. (1984). " A service quality model and its market implications". *European Journal of marketing*, Vol.18 No.4, pp.36-44.
- International Journal of Bank Marketing*, Vol.17, No.6, pp.295-300.
- Jun, M. & Cai, S. 2001, "The key determinants of Internet banking service quality: a content analysis", *International Journal of bank marketing* , 19/7 , 276-291.
- Kavousi, M., Soghaei, A.(1996). *Methods of measuring customer satisfaction*. (First Ed.). Semat Publication, Tehran.
- Madu, C.N and Madhu, A. A. (2002), "Dimensions of e-quality", *International Journal of Quality & reliability management*, vol. 19, No. 3, pp.246-58.
- Mols, N. P. (2000), "The Internet and banks strategic distribution channel decisions", Oliver, R.L., (1993), "cognitive, affective and attribute bases of the satisfaction response", *Journal of consumer research*, Vol.20, No. 3, pp.418-30.
- Parasuraman, A., Berry, L.L., & Zeithaml, V.A. (1994). "Alternative Scales for Measuring Service Quality: A Comparative Assessment Based on Psychometric and Diagnostic Criteria", *Journal of Retailing*, 70 (3), 201-30.
- Parasuraman, A., Zeithaml, V.A., and Berry, L.L (1985). "SERVQUAL, A multiple-item scale for measuring consumer perceptions of service quality". *Journal of retailing*, Vol.64.No.1: Spring.
- Saha, P and Zhao, Y.(2005). "Relationship between online service quality and customer satisfaction : A study in internet banking". Department of business administration and social sciences, Lulea University of Technology.
- Schneider, L.A., and Heskit, J.L. (1991). "Breaking the cycle of failure in service" *Stone management Review*: pp.17-28.
- Wolfenbarger, M.F., and Gilly, M.C. (2002). "comQ: Dimensionalizing. Measuring and predicting quality of E-tail experience". *Marketing Science institute*, Cambridge, M.A., 02-100.
- Yang, Z., and Fang, X. (2004). "Online service quality dimensions and their relationship with customer satisfaction: A content analysis of customer reviews". *International Journal of Service Industry management*, Vol.15. No.3: pp.26-38.
- Yang, Z and Fang, X. (2004), "Online Service Quality Dimensions and their relationships with satisfaction.", *International Journal of Service Industry Management*, Vol. 15, No.3.
- Zeithaml, Valerie, Parasuraman, Arun, and Berry, Leonard L. (1985). *Problems and Strategies in Services Marketing*. *Journal of Marketing*, Vol. 49 (Spring), pp. 33-46.